DOCUMENT RESUME

ED 149 302 CS 003 876

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TITLE The Use of an Unobtrusive Screening Device to Approximate Reading Levels of Adults.
PUB DATE Dec 77
NOTE 10p.; Paper presented at the Annual Meeting of the National Reading Conference (27th, New Orleans, Louisiana, December 1-3, 1977)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS Adult Basic Education; Adults; Evaluation Methods; *Informal Reading Inventory; *Reading Ability; Reading Comprehension; *Reading Level; *Reading Research; *Test Reliability; *Test Validity
IDENTIFIERS *Informal Reading Inventory for Directive Teaching

ABSTRACT

This study tested the validity and reliability of the West Informal Reading Evaluation (WIRE), an unobtrusive screening device that identifies adult learners' reading abilities. Of the 154 students in basic education or high school completion courses who completed one form of WIRE, 123 subjects were administered another reading test that served as the validity criterion, and 100 subjects were administered a second form of WIRE to determine the instrument's reliability. Results indicate that both WIRE forms are valid measures of adult silent-reading comprehension and yield reliable scores for the informal assessment of adult reading levels. The study concludes that reading teachers can use WIRE to select initial instructional materials, to select more-specific diagnostic instruments, to survey students in adult reading classes, and to assign students to adult reading classes. (RL)

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THE USE OF AN UNOBTRUSIVE SCREENING DEVICE TO APPROXIMATE READING LEVELS OF ADULTS

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The need for a minimal threat reading evaluation instrument has been recognized by adult educators for some time (Fay, 1966; Otto and Ford, 1967; and Bowren and Zintz, 1977). In recent years, there have been several attempts to devise such an instrument (Smith et al., 1965; White and Kirkland, 1971; Leibert, 1972; Rakes, 1973; and Brown, 1974). However, the majority of these attempts have utilized formal testing situations and required the adult student to read orally.

In order to reduce the possibility of interference from test anxiety, an unobtrusive screening device (Webb et al., 1972 and Farr, 1970) was developed for use within an adult education center. The device was designed as a student survey and used to approximate

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reading levels without formal testing.

Scores were expressed in grade levels 0 - 9, with the 9 level indicating a functional adult reader. Specific diagnosis was not the intent of this "testing", but rather a screening process to identify reading levels of entering students.

The device/instrument, the West Informal Reading Evaluation (WIRE) (West, 1977), was disguised as a student survey and presented in three brief, separate passages and written in relation to adult school and student classes. The passages were written at the 3, 6, and 9 grade levels and arranged in ascending order of difficulty. Readability was determined with the use of the Maginnis (1969) adapted formulation of the Fry Readability Graph (1968). Content of the passages elicited a brief written response (Betts, 1957) from the student, which served as the basis for evaluation.

Sample

One-hundred fifty-four adults, including both Basic Education students as well as Adult High School Completion students, completed form-1 of the WIRE. One-hundred twenty-three of the same students were then tested using the Reading for Understanding Test (RFU) (Thurstone, 1963). The RFU was utilized as the validity criterion, and was one of the instruments used in this particular center. One-hundred of the original 154 students were randomly asked to complete a parallel form of the WIRE, the WIRE-2, in order to determine reliability. Students ranged in ages from 16 to 70 with the average age being 25 years.

Black and white Americans constituted the largest portion of students with only a small segment of foreign students represented. Approximate distribution of males to females was 40% to 60% respectively.

Testing

The WIRE-1 was group administered to the students by their classroom teachers. The instrument was presented as a student survey and all students were encouraged to share their individual ideas, views and opinions. Distribution, completion and collection of the WIRE took approximately 15 to 20 minutes with a discussion of the passage topics following the collection of response sheets. A discussion was included in order that all students would be able to express their views whether or not they were able to read all of the passages. Students were told that the survey was also a means of estimating how well they read and that this would enable teachers to select materials, plan classes and help students to register more accurately.

Due to the nature of the instrument, the unobtrusiveness, it was anticipated that some adult students would object to being tested without giving their consent. However, no negative reactions were noted and most students were curious as to how well they had scored.

Scores

WIRE scores were based upon the correctness, feasibility and completeness of the student's response to each passage. Beginning with a score of 0 (no apparent reading ability) scores indicated the following:

-3	below a 3rd grade level reading ability
3	approximately a 3rd grade level reading ability
3+	better than a 3rd grade level, but not more than a high 4th grade level
-6	below a 6th grade level, but not lower than a high 4th grade level
6	approximately a 6th grade level ability
6+	better than a 6th grade level, but not more than a high 7th grade level
-9	lower than a 9th grade level ability, but not lower than a high 7th grade level
9	approximately a 9th grade level ability

A problem that occasionally presented itself involved readers who responded correctly and exceptionally well at the level 6 passage, but entered a "no comment" at the level 9 passage. In this case a score of 6+ seemed to be a low estimate and a -9 possibly a closer approximation of the reader's true ability, Judgement in borderline situations was enhanced with scoring practice and was not as intuitive or ambiguous as it would appear.

Results

Correlation of test results indicated that the WIRE-1 and WIRE-2 were both valid measures of adult silent reading comprehension as related to the RFU. (See Table 1.) The WIRE, as an instrument/strategy, also yielded reliable scores and provided an informal method for quick and easy assessment of reading levels.

TABLE 1

Correlation Coefficients of the WIRE-1, WIRE-2, and RFU Test Scores

Test	WIRE-1	WIRE-2	RFU
WIRE-1		.847** (N=100)	
WIRE-2			.818** (N=100)
RFU	.866** (N=123)		

** P< .01

Inter-Rater Reliability

Forty surveys were randomly selected from the returned WIRE-2 response sheets and used for the collection of inter-rater reliability data. Two teachers, one a trained rater and the other untrained, scored the 40 surveys. The untrained rater was given verbal instructions in scoring procedures, but was not allowed to practice prior to actual scoring. Table 2 lists the inter-rater means, standard deviations, and range of scores used to determine the reliability coefficients.

Table 2

Means, Standard Deviations and Range of Scores of Raters on Forty WIRE-2 Tests

Rater	Mean	Standard Deviation	Range of Scores
1 (Researcher)	7.62	1.46	4.0 - 10.0
2 (Trained)	8.00	1.33	4.0 - 10.0
3 (Untrained)	7.85	1.73	3.0 - 10.0

Correlations were significant ($P < .01$) and indicated that the WIRE scoring procedure was not difficult and was adequate to yield reliable scores. Table 3 lists the correlation coefficients among the raters.

Table 3

Inter-Rater Reliability Correlation Coefficients from Scores of Forty WIRE-2 Tests

Rater	1	2	3
1 (Researcher)			.823**
2 (Trained)	.854**		
3 (Untrained)		.949**	

**$P < .01$

Nonstatistical Data

The passages of the WIRE, a total of 6 for both forms, also elicited important data from other than approximate reading levels. Subjective responses provided information that characterized a specific adult education population and lent insight into adult students in general. As an instrument/strategy, the WIRE also proved to be a viable method for the collection of self-reported demographic data. Areas of inquiry included means of transportation used by the student, educational preferences, vocational goals, and curricular needs as related to career plans.

Discussion

One of the advantages of using an informal method for assessing reading levels was that it could be developed and tailored to fit a specific population. The WIRE was one form of an instrument, an Informal Reading Inventory (IRI) in essence, that could be teacher constructed and adapted to any program or locale. With intervals of 0,3,6, and 9, the WIRE was not sensitive enough to distinguish small increments of growth within short periods of time. However, with some adult students who progress rapidly it might be possible to use a form of the WIRE every three to four months. The WIRE also has potential for assessment of writing, spelling and grammar; however, much more would be needed in the way of effective scoring procedures for accurate analyses.

The use of an unobtrusive screening device, such as the WIRE, would be a feasible method of use with adult students and possibly even children and adolescents.

Recommendations for use of the WIRE included the following:

1. Use as a general reading level indicator for the selection of initial instructional materials.
2. Use as a general reading level indicator allowing for the selection of more appropriate, specific diagnostic instruments.
3. Use as a survey, as well as a reading evaluation, for the collection of student input or feedback.
4. Use as a pre-registration screening device in order to allow early assignment of students, who need instruction or remediation, to reading classes.

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